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REMARKS

Claims 1-62 are pending in the present Application. Claims 42-62 have been allowed, Claims 1, 2, 22, and 23 have been amended, and Claims 63-67 have been added, leaving Claims 1-41 and 63-67 for further consideration upon entry of the present Amendment.

Support for the amendment to Claim 1 can at least be found in the specification at paragraph [0023].

Support for new Claims 63-64 can at least be found in originally filed Claim 1 and in the specification at paragraph [0023].

Support for new Claim 65 can at least be found in the specification at paragraph [0026].

Support for new Claim 66 can at least be found in originally filed Claim 15 and in the specification at paragraph [0026].

Support for new Claim 67 can at least be found in originally filed Claim 1.

With regards to Claims 2, 22, and 23, the claims have not been amended to overcome any art made of record or any rejections. Rather, Claims 2, 22, and 23 have been amended for consistency. More particularly, the word "said" used in these claims has been amended to "the".

The Specification and Drawings has been amended to correct certain typographical errors, as explained in detail below. No new matter has been introduced by these amendments.

Reconsideration and allowance of the claims is respectfully requested in view of the above amendments and the following remarks.

IDS

Applicants respectfully direct the Examiner's attention to the information disclosure statement filed on July 25, 2002. The Examiner returned the corresponding PTO-1449 form with the reference cited therein lined out, with a hand written note stating that it was a "duplicate cite". Applicants respectfully submit that this is not a duplicate cite. It is noted that in the information disclosure statement filed July 25, 2002, Applicants cited an International Search Report having a date of mailing of 21/05/2002. In another information disclosure statement filed on March 17, 2003, Applicants cited an International Search Report having a date of mailing of 25/02/2003. These cites are not duplicates, since they refer to different search reports.

Applicants respectfully request that the Examiner reconsider the information disclosure statement

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filed on July 25, 2002, and return an initialed PTO-1449 form indicating that the Examiner has considered this reference.

Drawings

In reviewing the drawings, a few minor informalities were noted. More particularly, with regards to Figure 2, reference numeral 76 is shown in the figure, but is not discussed in the specification. Accordingly, Applicants have amended Figure 2 to remove reference numeral 76. With regards to Figure 3, the reference number "110" is used to call out electrolysis module. However, reference numeral "110" is used in Figure 1 to call out water 110. Applicants have amended reference numeral "110" to "10" in Figure 3 to correspond with the description, i.e., electrolysis module 10. The corrections in the figures are circled for the Examiner's convenience. Applicants respectfully request that the Examiner enter these amendments to the drawings, as they place the case in better condition for allowance.

Specification

In reviewing the Application, a few minor informalities were noted and corrected. More particularly, in paragraph [0022], a misplaced "the" has been deleted. In paragraph [0030], the word "with" has been amended to "which" to correct the grammar of the sentence. In paragraph [0043], reference numeral "38" has been amended to "36" to correspond with "phase separator" 36, and the reference numeral "42" has been deleted and the verbiage of the sentence corrected to indicate that water is recycled to "water source" rather than a "power source" as is the case with reference numeral 42. In paragraph [0051], a random letter "x" at the end of the paragraph has been deleted. Applicants respectfully request that the Examiner enter these amendments as they place the case in a better condition for allowance.

Objection to the Specification

The disclosure stands objected to because of the following alleged informalities:
"Drawing numerals 20, 24, 58, and 80 are not found in the specification. The numeral 48, on page 11, line 6 is not found in the drawings." (O.A., page 6).

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With regards to drawing numerals 20, 24, and 58, Applicants respectfully direct the Examiner's attention to at least paragraph [0055]. In that paragraph, Applicants discuss a power conditioner (20), a fan (24), and a filter (58). With regards to drawing numeral 80, Applicants respectfully direct the Examiner's attention to at least paragraph [0059], which discloses a conduit (80). Since these reference numerals are discussed in the specification, Applicants respectfully request that the Examiner withdraw this objection.

With regards to reference numeral 48, Applicants have amended the specification to correct the typographical error contained therein. More particularly, power conditioner "48" has been amended to power conditioner "20". Support for this amendment can at least be found in the specification at paragraph [0055]. Accordingly, Applicants respectfully request that the Examiner withdraw the objection to the specification with regards to reference numeral 48.

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-41 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, with regards to Claim 1, it is alleged that "the water storage" device lacks antecedent basis, and that the claim recites a "second water storage device", but no "first" such device. This rejection is moot with regards to independent Claim 1, as those limitations have been rewritten as a dependent claim. (See new independent Claim 67). Nevertheless, in order to be fully responsive to the Office Action, Applicants respectfully requests that the Examiner consider the following with regards to Claim 67.

Applicants have amended the "water storage device" to a "first water storage device" to provide proper antecedent basis to "water storage device" and to provide consistency with the style of claiming employed in the application. More particularly, with regards to the Examiner's concern that a second water storage device was claimed without reciting "a first", Applicants respectfully submit that the terms "first," "second," and the like do not denote any order or importance, but rather are used to distinguish one element from another. In other words, the term "first" is not needed. Nevertheless, in reviewing the claims it is noted that the term first was used to distinguish one element from another in other claims (e.g., Claim 58). As such, Applicants

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have added the word "first" prior to "water storage device" for consistency in claiming. Accordingly, Applicants respectfully request withdrawal of the rejection to Claim 1.

With regards to Claim 2, the Examiner alleged that "the term 'inverted hydrogen storage device' in Claim 2 is not understood, and is not defined in the specification". (O.A., page 3). Applicants respectfully disagree with the Examiner that the term "inverted hydrogen storage device" is not understood, and further submit that it is defined in the specification. More particularly, Applicants respectfully direct the Examiner's attention to at least paragraph [0042] of the specification and item number 4 of Figure 3. For example, in paragraph [0042], Applicants teach that

the hydrogen storage system can comprise an inverted hydrogen storage device (i.e., a hydrogen storage device comprising a bi-directional opening (inlet and outlet), and/or which allows hydrogen removal from an upper vessel connection, while water is removed via a gravity drain port (see item 4 in Figure 3). In the inverted hydrogen storage device, the device is allowed to collect condensed moisture and return this condensed liquid to the water storage device(s) 16 or other water sub-system components. Alternatively, the inverted hydrogen storage device can be used as a secondary water separator when used with a primary water separator, e.g., hydrogen/water phase separation device 36 (which may comprise multiple stages of separators to improve water extraction and recovery).

(Application, paragraph [0042]).

In other words, the inverted hydrogen storage device can be a component of the hydrogen storage system and can be a component of a hydrogen/water phase separation system. In Claim 2, Applicants claim a hydrogen/water phase separation system comprising an inverted hydrogen storage device. As such, Claim 2 particularly points out and distinctly claims the subject matter which applicant regards as the invention. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection to Claim 2.

With regards to Claim 15, the Examiner stated that "[c]laim 15 is confusing as to whether the oxygen produced by the electrolysis module (second paragraph from the bottom) is the same as the 'feed oxygen' recited in line 4 of this claim." (O.A. page 2). Applicants respectfully submit that "the feed oxygen" is distinctly claimed from the oxygen produced from the electrolysis module, since Applicants claim the hydrogen and oxygen produced from the electrolysis module as "refuel hydrogen and oxygen". Nevertheless, Applicants have added the term "refuel" prior to "oxygen" with regards to the oxygen produced from the electrolysis module to more clearly distinguish the "feed oxygen" from the oxygen produced from the

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electrolysis module as being "refuel oxygen". Applicants respectfully submit that the use of the word "feed" and "refuel" prior to oxygen is used respectively to distinguish the oxygen from the oxygen/water phase separation device and the oxygen from the electrolysis module. This is similar to using "first" and "second" to distinguish one claim element from other claim elements. Having distinguished the elements, Applicants did not further limit the oxygen from the electrolysis module. Additionally, Applicants have updated Claim 16 to reflect the changes made to independent Claim 15. For at least these reasons, Applicants respectfully submit that Claim 15 particularly points out and distinctly claims the subject matter which applicant regards as the invention. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection to Claim 15.

Furthermore, in overcoming the above rejections, Applicants respectfully submit that Claims 3-5 and 15-41 are now allowable as indicated by the Examiner.

Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1, 2, 11, and 13 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 5,510,202 to McCoy. Applicants respectfully traverse this rejection.

To anticipate a claim, a reference must disclose each and every element of the claim. *Levmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

With regards to Claim 1, McCoy fails to teach a regenerative electrochemical cell system comprising, *inter alia*, a fuel cell module comprising a fuel cell hydrogen inlet in fluid communication a hydrogen storage system, and a fuel cell oxygen inlet in fluid communication with both a first oxygen source and a second oxygen source, wherein the first oxygen source is from a surrounding atmosphere and the second oxygen source is from a gaseous portion of an oxygen/water phase separation device. Rather, McCoy teaches that oxygen can be directed from an oxygen storage tank (330) via a line (345) to a fuel cell (205), wherein oxygen from an oxygen storage tank (330) is supplied to the water tank (300). (Col. 1, line 50 to Col. 2, line 19; and Figures 3-4). In other words, McCoy at least fails to teach a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a second oxygen source from a gaseous portion of an oxygen/water phase separation device. Since McCoy at least fails to teach a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a

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second oxygen source from a gaseous portion of an oxygen/water phase separation device, McCoy fails to teach each and every element of Applicants' independent Claim 1. As such, independent Claim 1 is not anticipated by and is allowable over McCoy. Moreover, as a dependent claim from an allowable independent claim, Claims 2, 11, and 13, are, by definition, also allowable.

Additionally, with regards to Claim 2, absent in McCoy is any teaching of an inverted hydrogen storage device as claimed and taught by Applicants. Rather, McCoy only teaches that the regenerative fuel cell system comprises a hydrogen storage tank. In other words, McCoy is silent on the element that the hydrogen storage device is inverted. As such, Claim 2 is allowable over McCoy independently of a finding that Claim 1 is allowable.

Claim Rejections Under 35 U.S.C. § 103(a)

Claim 14 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,510,202 to McCoy. Applicants respectfully traverse this rejection.

For an obviousness rejection to be proper, the examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

McCoy fails to teach or suggest a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a second oxygen source from a gaseous portion of an oxygen/water phase separation device. Rather, McCoy teaches a system that "eliminates the need for gaseous oxygen storage altogether. All oxygen consumed by the fuel cell system can be extracted directly from the surrounding air. All oxygen produced by the electrolyzer is, in turn, vented back into the atmosphere." (Col. 4, lines 50-54). In other words, McCoy is only teaching a single oxygen source, e.g., oxygen from the surrounding air. As such, McCoy fails to teach or

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suggest each and every element of Applicants' independent Claim 1. Accordingly, independent Claim 1 is not obvious over and is allowable over McCoy. For at least the reason that Claim 14 is a dependent claim from an allowable independent claim, Claim 14 is also allowable.

Claims 10 and 12 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,510,202 to McCoy in view of U.S. Patent No. 5,95,474 to Chen et al. Applicants respectfully traverse this rejection.

In making the rejection, the Examiner relied upon Chen et al. for their teaching of a fuel cell assembly (40) employing a power conditioner (70), which can be employed to convert DC electrical voltage and current from the fuel cell assembly (40) to usable AC voltage and current for use in a building. (Col. 5, lines 16-41). However, Chen et al. fail to cure the deficiencies of McCoy with regards to independent Claim 1. More particularly, Chen et al., either alone or in combination with McCoy, fail to teach or suggest a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a second oxygen source from a gaseous portion of an oxygen/water phase separation device. Since Chen et al. at least fail to teach or suggest a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a second oxygen source from a gaseous portion of an oxygen/water phase separation device, Chen et al. fail to teach or suggest each and every element of Applicants' independent Claim 1. As such, independent Claim 1 is not obvious over and is allowable over McCoy in view of Chen et al. Moreover, as a dependent claim from an allowable independent claim, Claims 10 and 12 are, by definition, also allowable.

Claims 6, 8, and 9 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,510,202 to McCoy in view of U.S. Patent No. 4,302,684 to Gogins. Applicants respectfully traverse this rejection.

In making the rejection, the Examiner relied upon Gogins for teaching that electrical sources include, nuclear, hydro-electric power generation, solar power generation, and wind power generation. (Col. 1, lines 15-18). Gogins teaches with regards to wind power that a supplemental energy storage system can be employed, for example, a system that can store hydrogen generated by electrolysis. (Col. 2, lines 55-59). However, Gogins fails to cure the

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deficiencies of McCoy with regards to independent Claim 1. More particularly, Gogins, either alone or in combination with McCoy, fails to teach or suggest a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a second oxygen source from a gaseous portion of an oxygen/water phase separation device. Since Gogins at least fail to teach or suggest a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a second oxygen source from a gaseous portion of an oxygen/water phase separation device, Gogins fail to teach or suggest each and every element of Applicants' independent Claim 1. As such, independent Claim 1 is not obvious over and is allowable over McCoy in view of Gogins. Moreover, as a dependent claim from an allowable independent claim, Claims 6, 8, and 9, are, by definition, also allowable.

Claim 7 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,510,202 to McCoy in view of U.S. Patent No. 4,302,684 to Gogins, and further in view of U.S. Patent No. 5,443,804 to Parker et al. Applicants respectfully traverse this rejection.

In making the rejection, the Examiner relied upon Parker et al. for teaching "a power conditioning means (120) between the electrolysis cell (70) and a power source (110)." (O.A., page 4). More particularly, it is noted that Parker et al. teach

Hydrogen produced during solar- augmented electrolysis, and oxygen produced during the reformation step, are combined in fuel cell 110 to generate electrical power and potable water. The electrical power is conducted to power conditioning unit 120 for subsequent use in electrolysis cell 70.

(Col. 9, lines 57-62).

However, Parker et al. fail to cure the deficiencies of McCoy and Gogins with regards to independent Claim 1. More particularly, Parker et al., either alone or in combination with McCoy and Gogins, fail to teach or suggest a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a second oxygen source from a gaseous portion of an oxygen/water phase separation device. Since Parker et al. at least fail to teach or suggest a fuel cell in fluid communication with an oxygen source from a surrounding atmosphere and a second oxygen source from a gaseous portion of an oxygen/water phase separation device, Parker et al. fail to teach or suggest each and every element of Applicants' independent Claim 1. As such, independent Claim 1 is not obvious over and is allowable over McCoy in view of Gogins and

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further in view of Parker et al. Moreover, as a dependent claim from an allowable independent claim, Claim 7 is, by definition, also allowable.

Prior Art Made of Record

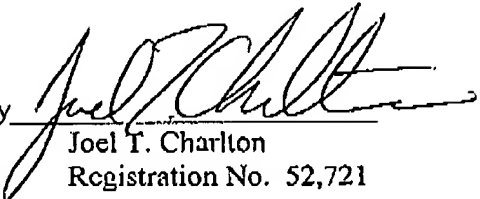
Applicants respectfully submit that the claims are not anticipated by, are not obvious over, and are allowable the prior art made of record that was not relied upon by the Examiner.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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